

Remarks

Claims 1-5, 7-28 and 30-38 remain in the application. Claims 1, 7, 9, 10, 13, 24, 30,32, 33, 36 and 38 have been amended, and claims 6 and 29 have been cancelled in order to more clearly define applicant's invention.

As stated above, the applicant appreciates the examiner's thorough examination of the subject application. The Examiner has entered new grounds of rejection. Claims 1-5, 14-18, 22-28 and 36-38 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Stanford et al, taken in view of Christensen et al. Claims 6-13, 19-21 and 29-35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Stanford et al. taken in view of Christensen et al. and further in view of Ekrot et al. These rejections are respectfully traversed and reconsideration of the claims is requested in view of the foregoing amendments and following remarks.

The claims are directed to a remote server object architecture for implementing computing-intensive speech recognition systems that require simultaneous operations of multiple functional units. This is accomplished by having a number of discrete servers. The servers can be located in separate computer systems so that simultaneous operations can occur. Four types of functions related to speech recognition have been identified and isolated in different operating units of the claimed architecture. In claim 1, the four functions and operating units are defined as follows: (1) a first server object coupled to a telephone network for receiving a voice data message from said telephone network; (2) a second server object having a first connection to said first server object for receiving said voice data message from said first server object and converting said voice data message to a phonetic data message; (3) a third server object having a second connection to said second server object for receiving said phonetic data message from said second server object and converting said phonetic data message to a syntactic data message; and (4) a fourth server object having a third connection to said third server object for receiving said syntactic data message from said third server object and converting said syntactic data message to a semantic data message, which is representative of said voice data message. In claim 1 the first, second and third connections are formed over a first computer network.. Claims 1 and 24 have been further amended to include the control monitor, previously recited in the dependent claims 6 and 29. Accordingly, claims 6 and 29 have been cancelled. The architecture of claims 1 and 24 has the advantage of allowing system-wide

load balancing by means of borrowing functional servers from the applications having low load and reassigning them to more demanding applications. It is submitted that claimed subject matter is neither anticipated nor made obvious by the Stanford et al. and Christensen references.

With regard to the Stanford et al reference, describes IBM's speech recognition system. However, the Stanford et al patent does not disclose the claimed object/function of the server architecture described and claimed in the present application. For example, the fourth server recited in applicant's claims 1 and 24 performs a function, semantic processing, that is not disclosed or claimed by Stanford et al. Stanford et al. disclose an architecture that works on a single computer. In fact, the thrust of the Stanford et al. disclosure is how to accommodate a speech recognition application with the limited resources of a single computer or microprocessor.

The reference states briefly that the architecture can be ported to other hardware systems. No specifics are given as to what is meant by "other hardware systems" and thus, clearly is not a teaching of the claimed subject matter of the present application. It is submitted that it is far from trivial or obvious how to make any specific tasks work over multiple computers in a network. In fact, this is a huge area of ongoing development in computer technology. The objective and disclosure of the claimed invention of the present application is directly opposite to that of the teachings of the Stanford et al reference. The claimed architecture gets around the limitations of single processors through a cooperative network architecture. Stanford et al, for example, refer to limited memory (col 3, lines 16-17). With a large network of computers, clearly memory is not a design limitation.

The secondary reference, Christensen, et al, describes the widely-accepted Microsoft's Remote Automation Object Technology, which is also embodied and well known as OLE and COM, or OLE automation. Microsoft's DCOM is an improvement of COM. The present disclosure makes reference to both DCOM and Remote Automation as components of the disclosed system. However, the Christensen et al reference does not disclose or suggest the system architecture for use in the speech recognition application being claimed by applicant. Thus, applicant's claims are directed to a system architecture for a speech recognition application, that can include the widely accepted DCOM and Remote Automation components. The disclosure describes a technology that combines the transparent remote architecture of

DCOM with high-speed data communication links, and custom messaging protocols, and a distributed architecture that produces a transparent, high-bandwidth combination of multiple computers in a technology that is specifically suited to speech recognition. Applicant respectfully disagrees that Microsoft remote automation provides either "physical performance" or "administration" of a speech recognition system.

The Examiner has also referenced Ekrot et al. (U.S. Patent No. 6,115,713). It is noted however that the patent number actually is identified as Pascucci et al., and it is assumed that this is the reference being relied upon by the Examiner. Pascucci describes a system monitor. However, Pascucci et al. does not disclose the system architecture for a speech recognition application as claimed in the present application.

In summary, therefore the remaining claims 1-5, 7-28 and 30-38, are all believed to be allowable. An early and favorable action thereon is therefore earnestly solicited.

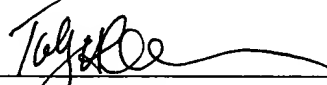
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If the Examiner believes there are any outstanding issues to be resolved with respect to the above-identified application, the Examiner is invited to telephone the undersigned at their earliest convenience so that such issues may be resolved telephonically.

Respectfully submitted,

Date: _____

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Toby H. Kusmer
Reg. No.: 26,418
McDermott Will & Emery LLP
28 State Street
Boston, MA 02109
V: (617) 535-4065
F: (617) 535-3800
E: tkusmer@mwe.com